REMARKS/ARGUMENTS

In the specification, Table I to correct minor editorial problems. In column 4, row 17 "OAM" has been amended to "OAT" as the top of column 4 indicates.

Claims 1, 2, 7-29, 31 and 32-34 remain in this application. Claims 1, 13, 20, 24, and 32 have been amended. Claims 3-6, and 30 have been canceled.

The Examiner has rejected claims 1-6 under 35 U.S.C 102(b) as being anticipated by Morena (U.S. Pat. No. 5,094,677). Applicants respectfully traverse the Examiner's rejection for the following reasons.

Claim 1 has been amended. Claims 2-5 have been cancelled. The limitation of claim 6 has been included in claim 1 and claim 6 has been cancelled. Claim 1 as now amended recites a ceramic structure comprising a first phase $Cs_2O{\cdot}Al_2O_3{\cdot}4SiO_2$ (CAS_4), a second phase $Cs_2O{\cdot}Al_2O_3{\cdot}2SiO_2$ (CAS_2), and a third phase selected from the group consisting of $SrO{\cdot}Al_2O_3{\cdot}2SiO_2$ (SAS_2), $SrO{\cdot}\ SiO_2$ ($SrSiO_3$) and combinations thereof, wherein the ceramic has a high thermal expansion anisotropy of between 1400-1450 ppm, as calculated from dimensional change $\Delta L/L_o$ over a temperature range from room temperature to 1000°C, and an average coefficient of thermal expansion from room temperature to 1000°C of -10×10^{-7}/°C to $+25 \times 10^{-7}$/°C.

The Examiner states Morena discloses the glass frit optionally includes alkaline earth metal oxides, such as strontium oxide (SrO), and that such a material will react with SiO_2 and Al_2O_3 to form a third phase of $SrO{\cdot}Al_2O_3{\cdot}2SiO_2$ (SAS_2) in the ceramic disclosed therein.

Morena teaches optionally adding alkaline earth metal oxides as adjuvants and diluents. The present invention requires up to 30 % by weight SrO substitution for Cs_2O to form a third phase selected from the group consisting of $SrO{\cdot}Al_2O_3{\cdot}2SiO_2$ (SAS_2), $SrO{\cdot}\ SiO_2$ ($SrSiO_3$) and combinations thereof. Morena neither teaches SrO substitution for Cs_2O, nor the formation of a third phase. In fact Morena teaches away from the latter by disclosing that the adjuvants and diluents should be incorporated in small amounts in the glass composition, i.e., in amounts which do not cause the development of low melting glassy phase, or cause the generation of low temperature crystal phases, or otherwise affect the overall properties exhibited by the final product (column 4, lines 11-20). Clearly, Morena teaches adding alkaline earth metal oxides as additives and in such amounts to prevent the formation of third phases in ceramics having phases of pollucite and $Cs_2O{\cdot}Al_2O_3{\cdot}2SiO_2$. Therefore, claim 1 is not anticipated by Morena. Applicants respectfully request reconsideration of the rejection of claim 1 under 35 U.S.C 102(b) over Morena.

The Examiner has rejected claims 7-12 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura (5,766,393). The Examiner states that Morena discloses the applicants claimed ceramic structure, and since Nishimura discloses a diesel particulate filter made of a similar ceramic structure it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ceramic of Morena in the diesel particulate filter of Nishimura. Applicants respectfully traverse the Examiner's rejection for the following reasons.

Morena is directed at a method of making pollucite ceramics. Morena does not provide any teaching or suggestion for the use of pollucite ceramics as diesel particulate filters. Nishimura is directed at a method for plugging honeycomb structures. Nishimura teaches that the material for honeycomb structures used in diesel particulate filters can be cordierite, mullite, alumina, zirconia, silicon carbide, silicon nitride, or a composite material thereof (column 4, lines 30-32). Nishimura does not teach or suggest using $Cs_2O/Al_2O_3/SiO_2$ –containing ceramics for diesel particulate filters, nor does it provide any motive for modifying the material of the honeycomb structures.

Applicants respectfully submit that the Examiner failed to provide a *prima facie* case of obviousness because in the case of combined references, the Examiner can satisfy this burden "only by showing some objective teaching in the prior art . . . would lead that individual to combine the relevant teachings of the references." In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Moreover, both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

Not only did the Examiner fail to meet his burden of establishing a *prima facie* case because one of ordinary skill in the art would lack the motivation to modify Morena. But he failed to meet that burden because one skilled in the art would lack the motivation to combine the teachings of Morena and Nishimura. Therefore, Applicants respectfully request reconsideration of the rejection of claims 7-12 under 35 U.S.C 103(a) over Morena in view of Nishimura.

The Examiner has rejected claims 13, 15, 17-19, 21-23, 24, 25, 27, 29-31 and 35 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura. Applicants respectfully traverse the Examiner's rejection for the following reasons.

The present invention as claimed in claims 13 and 24 requires in the method of forming an emulsion consisting essentially of, about 95 % , by weight, deionized water, about 0.7 %, by weight, triethanolamine and about 4.3 %, by weight, oleic acid, and combinations thereof, and a polymer selected from the group consisting of a crosslinked polyacrylic acid copolymer, a polyethylene oxide polymer, and combinations thereof. Neither Morena nor Nishimura teaches or suggests this limitation.

MPEP 2143 states that "to establish a prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach or suggest all the claim limitations." Therefore, since the elements of the present invention cannot be found in either of the cited references the Examiner has failed to establish a prima facie case of obviousness, and the present invention recited in independent claims 13 and 24, and dependent claims 15, 17-19, 21-23, 25, 27, 29-31 and 35 is patentable over the combination of Morena and Nishimura.

The Examiner has rejected claims 14 and 28 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura and further in view of Quadir. Applicants respectfully traverse the rejection for the following reasons. As described above the combination of Morena and Nishimura does not teach all the elements of the present invention embodied in claims 13 and 24 from which claim 14 and claim 28 depend respectively. Since the further combination with Quadir does not solve this deficiency, then claim 14 and claim 28 are patentable over Morena in view of Nishimura and further in view of Quadir.

The Examiner has rejected claims 16 and 26 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura and further in view of Mori. Applicants respectfully traverse the rejection for the following reasons. As described above the combination of Morena and Nishimura does not teach all the elements of the present invention embodied in claims 13 and 24 from which claim 16 and claim 26 depend respectively. Since the further combination with Mori does not solve this deficiency, then claim 14 and claim 28 are patentable over Morena in view of Nishimura and further in view of Mori.

The Examiner has rejected claim 32 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura and further in view of Bailey. Applicants respectfully traverse the rejection for the following reasons. As described above the combination of Morena and Nishimura does not teach all the elements of the present invention embodied in claim 24 from which claim 32 depends. Since the further combination with Bailey does not solve this deficiency, then claim 32 is patentable over Morena in view of Nishimura and further in view of Bailey.

The Examiner has rejected claim 33 under 35 U.S.C 103(a) as being unpatentable over Morena in view of Nishimura and further in view of Kasai. Applicants respectfully traverse the rejection for the following reasons. As described above the combination of Morena and Nishimura does not teach all the elements of the present invention embodied in claim 24 from which claim 33 depends. Since the further combination with Kasai does not solve this deficiency, then claim 33 is patentable over Morena in view of Nishimura and further in view of Kasai.

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Applicants believe that a one-month extension of time is necessary to make this Reply timely, and accordingly authorize the Office to charge the prescribed fee for that time extension to the deposit account of Corning Incorporated, Deposit Account 03-3325. Should additional extensions be required, the Office is respectfully requested pursuant to 37 C.F.R. § 1.136(a) to grant the same, and to charge any additional fees or surcharges for such extensions to the same deposit account.

Please direct any questions or comments to Anca C. Gheorghiu at (607) 974-3322.

Respectfully submitted,

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